National Institute of Environmental Health Sciences

Pro-equity effects of ancillary benefits of climate change policies: A case study of human health impacts of outdoor air pollution in New Delhi

Author(s): Garg A
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Abstract:

This paper looks at the human health impacts from urban air pollution in India. Such pollution is especially harmful to poor people, so the co-benefits from global climate change policies in terms of reduced local air pollution can have positive equity impacts. Health impacts (mortality and morbidity) of PM(10) pollution are quantified for different socio-economic groups in Delhi. The spatial PM(10) concentration levels are overlaid with spatial socio-economic data. Improvement in air quality would result in bigger health benefits for the poor. Most measures that reduce PM(10) pollutants also reduce CO(2) emissions while simultaneously imposing more costs on the better-off. (C) 2011 Elsevier Ltd. All rights reserved.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution

Air Pollution: Particulate Matter, Other Air Pollution

Air Pollution (other): SO2;NO2

Geographic Feature:

resource focuses on specific type of geography

Urban

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: India

Health Co-Benefit/Co–Harm (Adaption/Mitigation):

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Developmental Effect, Infectious Disease, Mental Health/Stress, Morbidity/Mortality, Respiratory Effect

Cardiovascular Effect: Heart Attack

Developmental Effect: Reproductive

Infectious Disease: Airborne Disease

Airborne Disease: Tuberculosis

Mental Health Effect/Stress: Schizophrenia/Delusional Disorder

Respiratory Effect: Asthma, Upper Respiratory Allergy, Other Respiratory Effect

Respiratory Condition (other) : tuberculosis

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Mitigation

Model/Methodology: ☑

type of model used or methodology development is a focus of resource

Cost/Economic, Exposure Change Prediction

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Children, Low Socioeconomic Status

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Short-Term (